

## Document Log Item

<b>Addressing</b>	
<b>From</b>	<b>To</b>
Adam Freedman/R9/USEPA/US	<Damonica.Pierson@Shell.com>
<b>CC</b>	<b>BCC</b>
George Robin/R9/USEPA/US@EPA	
<b>Description</b> <span>Form Used: Reply</span>	
<b>Subject</b>	<b>Date/Time</b>
RE: C6 CCS Plugging & Abandonment Plans	02/24/2010 04:50 PM
<b># of Attachments</b>	<b>Total Bytes</b>
0	7,342
<b>NPM</b>	<b>Contributor</b>
<b>Processing</b>	
<b>Comments</b>	

Body

### Document Body

Damonica,  
We have had some time to review Shell's Plugging and Abandonment plans and have a few comments. Please resubmit the schematics after incorporating these modifications:

- 1) The cement plug (#8) must be at least 200 feet long.
- 2) The cement plug (#6) should cover the perforations and should be at least (top of cement) 200 feet above the top perforation.
- 3) Please confirm that the "kill mud" (#7) is consistent with the qualities and properties required by Ca DOGGR (viscosity, weight/density, gel strength, etc.).
- 4) The base of the USDW must also have a 200 foot cement plug (this may be the same as the plug at the base of the surface casing set at 3,000 ft).
- 5) Plug #9 should also be 200 ft thick and up to the casing cut-off point (or as close as practical).

If you have any further questions, please feel free to be in touch. Thank you.

Adam Freedman  
Environmental Scientist, Underground Injection Control  
U.S. Environmental Protection Agency, Region 9  
75 Hawthorne Street (WTR-9)  
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415.972.3845  
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---02/17/2010 10:00:19 AM---Adam and George, attached below is a schematic that visually represents the temporary and permanent

From: <Damonica.Pierson@Shell.com>  
To: Adam Freedman/R9/USEPA/US@EPA  
Cc: George Robin/R9/USEPA/US@EPA  
Date: 02/17/2010 10:00 AM  
Subject: RE: C6 CCS Plugging & Abandonment Plans

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Adam and George, attached below is a schematic that visually represents the temporary and permanent P&A for the injection well. There is a note on the drawing that indicates similar P&A procedures for the monitoring well. Realizing that you originally requested two separate drawings, let me know if this will suffice.

-----Original Message-----

**From:** Freedman.Adam@epamail.epa.gov [mailto:Freedman.Adam@epamail.epa.gov]

**Sent:** Tuesday, February 09, 2010 6:18 PM

**To:** Pierson, Damonica M SEPCO-SWE

**Cc:** robin.george@epa.gov

**Subject:** C6 CCS Plugging & Abandonment Plans

Damonica,

In Attachment Q of your permit application, C6 describes their general plugging and abandonment (P&A) plans. I am requesting that C6 submit schematics (similar to Figure M-1) that will complement that written description. The schematics should visually represent both the temporary and permanent P&A plans as submitted (two separate schematics should be prepared), showing where the cement plugs will be, where mud will be used, an accurate portrayal of the wells after any of the temporarily installed monitoring equipment is removed, and the depths of relevant geologic formations. For guidance, on this website (<http://www.epa.gov/region09/water/groundwater/uic-permits.html#lapaloma>) click on the Final Permit for La Paloma Generating Company and see Figures 9a and 9b. If you have any questions, please feel free to contact me. Thank you.

Adam Freedman

Environmental Scientist, Underground Injection Control

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freedman.adam@epa.gov [attachment "TA\_PA well schematic Injection Well.ppt" deleted by Adam Freedman/R9/USEPA/US]